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THE ORGANIZATION AND ADMINISTRATION
OF EDUCATIONAL SYSTEMS:
INTERNAL STRUCTURES AND PROCESSES

by

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THE ORGANIZATION AND ADMINISTRATION OF EDUCATIONAL SYSTEMS: INTERNAL STRUCTURES AND PROCESSES

This paper is based upon a number of assumptions about the probable form which educational systems and the administration of these systems will take in the decades ahead. First, it is assumed that various aspects of organization which are characteristic of present formal systems of education will persist for a sufficient length of time to make discussing these aspects a worthwhile activity. It is assumed further that the formal system of education will change in the future, as it has in the past, through the introduction of new elements, the disappearance of some, and the modification of other elements. The final assumption is that most changes will result from the introduction and elaboration of possibilities which already appear realistic rather than through the adoption of innovations which are currently in the realm of wild and wishful speculation; the contribution of such speculation seems to be more along the lines of drawing our attention to feasible existing alternatives rather than in presenting us with additional immediate alternatives.

To the extent that it is necessary and relevant to do so, the position of the writer on each of the assumptions might also be clarified. The assumptions represent value positions which I accept; that is, changes in the administration and organization of educational systems should proceed through a consideration of feasible alternatives which will enable us to retain what is considered to be acceptable and desirable in present practice. I hold to the position that there is little to be gained from advocating the

abandonment of a formal, public system of education in favor of education by television and related media in the home, or in favor of a system of private or "free enterprise" education. Even though such factors might influence the form and substance of the formal system of public schooling in the future, that formal system should be retained as the major means of providing for the educational needs of children, if not for all age groups.

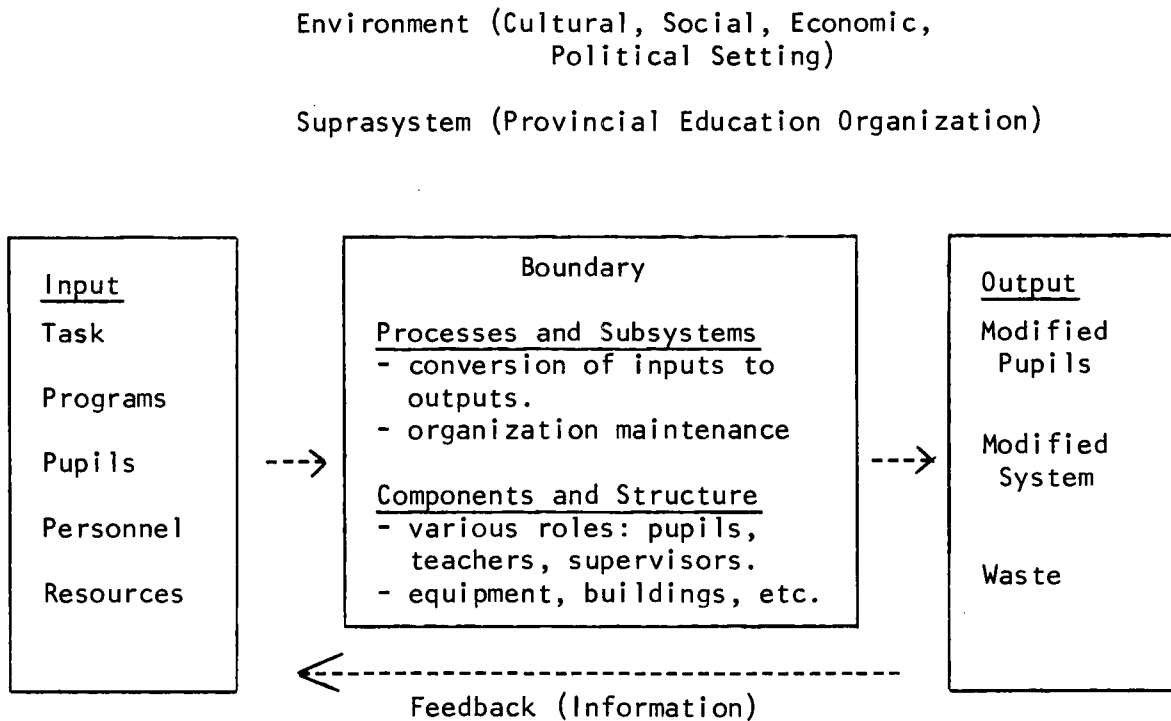
The approach which is taken in this paper is directed more toward the identification of the factors and forces which should shape the structure of various educational organizations rather than the prescription of particular forms. It is obvious that the prescription of specific forms must be based upon reliable knowledge or assumptions about the character of the forces which determine whether one organizational form or administrative practice is preferable to another. Since our knowledge and assumptions about the future character of these forces is subject to error, any prescriptions which are not based on clearly-defined assumptions are likely to be of limited usefulness. It is hoped that this attempt to describe the factors which should be taken into account in making decisions about organizations will prove to be more useful in long-range planning than would prescriptive models. Although some general guidelines are offered and a limited number of alternative models are suggested, it is recognized that these probably will fall short of the expectations of those readers who are interested in more concrete proposals for changes in the structure of education.

A Model for Analyzing Organizations

A system model has been selected as the most appropriate conceptual framework for an analysis of current conditions, issues, problems, and possible future trends in the administration of various educational organizations.¹ The adoption of a system model for any analysis implies that an attempt will be made to focus on the totality of some entity, to identify sequences of related activities, to examine significant relationships among constituent elements, and to pursue the implications of distinguishable events and activities for the total phenomenon. The system model has particular merit because it consists of a manageable number of basic concepts which can be extended and elaborated according to the demands of a particular analysis. Included in a set of basic concepts are environment and suprasystem, boundary, input and output, components and structure, processes and subsystems, and feedback loop; Figure 1 shows the elementary ordering of these concepts in the model.

¹ Readers will recognize that this particular conceptualization and specific definitions are adapted and adopted from various sources listed in the References section (Katz and Kahn, 1966; Miller, 1965; and others). It is hoped that this acknowledgement of general indebtedness to the literature will be an acceptable alternative to the identification of numerous specific references for the purposes of this paper.

Figure 1.



Educational Organizations as Systems

A school, school district, or any other specific educational organization (the model can be applied at any level) is viewed as an entity which exists in an environment and which engages in exchanges with relevant aspects of that environment. It is separated from the environment by a boundary, which is to say that it is possible to classify some elements as being part of the system and others as being outside of the system under consideration. The system (school, school district, college, etc.) receives from the environment inputs which fall into two major categories: (1) Information in the form of statements of goals and objectives, values to guide system functioning, programs or preferred ways of achieving major objectives, and so forth, and (2) matter/energy in the form of human,

material, and financial resources.

Students form that part of the input which is to be processed; after some period of time they are returned to the environment having been modified in cognitive skills and attitudes to varying degrees. Other outputs or results of system operation relate to the system itself and its future capabilities: higher or lower degrees of flexibility, increased or decreased morale levels, improved or deteriorated state of adaptation, and so forth. The concept of feedback suggests that both fairly directly and indirectly the results of the operation of the system up to any point in time are likely to have an effect on future operations through influencing system inputs.

Within the system the most readily discernible features are a variety of activities which are related in some way or other to the conversion of inputs into outputs. It is useful to think of the activities as being differentially related and to consider those which are closely associated with the same category of system needs or functions as constituting a process. Thus, all teaching-learning activities might be viewed as one major process in an educational organization. The activities which comprise any process are performed by people but also involve the use of equipment, materials, and facilities; both human and non-human elements are the components of the system. All components which are engaged in the same process form a particular subsystem, and it is meaningful to refer to the administrative subsystem or the teaching subsystem of a particular organization in this sense. The ordering of the various components (in this paper, mainly the human elements), the relationships among the components,

and the relatively enduring characteristics of processes, defines the structure of the system.

Any system under study may also be viewed as a subsystem of a larger entity identified as the suprasystem which is distinct from the total relevant environment. For school districts, the total provincial organization of education forms the suprasystem; there are elements in the environment of the school district which may or may not be of high relevance in the environment of the broader educational organization.

It would be inconsistent with a system perspective to leave a discussion of basic concepts without making some reference to the characteristic of the system as a whole. Concepts which make reference to the state of a system attempt to present this type of information. Three states or conditions are frequently mentioned in the literature which may be relevant to the present discussion: steady state, homeostasis, and morphogenesis (Buckley, 1967). Steady state refers to an equilibrium in which various forces that may impinge upon the system are kept in balance, homeostasis refers to a condition of dynamic equilibrium in which outside forces are able to shift variables within a certain range, and morphogenesis implies that the system is undergoing change, growth, and structural elaboration. Although it may be possible to classify organizations according to all three types of states, it may be more reasonable to view most as being in a morphogenetic state, more or less; that is, educational organizations are subject to internal growth, differentiation, and increasing complexity. It may also be in accord with reality to view such systems as being in a state of tension, strain, and internal conflict due

to the diversity of input, competing processes, and problems of adjusting to a changing environment. These forces are discussed in more detail in the section which follows.

Elaboration of the Model

Although the major emphasis in this paper should be on features which are internal to educational organizations, it is difficult to present a meaningful analysis without giving adequate attention to the factors which have a highly significant bearing on internal functioning and structure. It seems necessary, therefore, to give fairly detailed attention to those characteristics of the input, output, environment, and other variables which seem to play a deterministic role in relation to internal features. Some of these relevant characteristics are outlined and described in the text and summaries which follow. The general attempt is to identify those variables which make a difference in how a system is structured to carry on its processes, and what the current and possible future condition might be with respect to that characteristic. The concrete educational organization on which examples and descriptions are based is defined vaguely as a school district; appropriate modifications which would extend this to other organizations and levels could be made fairly readily.

Relevant Environment

An organization is not forced to cope with all aspects of its potential environment but only with selected parts of it which might be designated the relevant environment. For example, although schools and

school systems exist in a general economic environment which has an impact on how those systems function, the relevant economic environment consists of specific institutions and local conditions which influence the inputs to the systems. For a school district the relevant environment consist of groups and organizations in the local community, the Department of Education, other school systems, universities, and so forth which will vary in the following characteristics:

<u>Environmental Variable</u>	<u>Condition</u>
1. Scope: number of units in relevant environment and geographical dispersion.	Organized units tend to be few and proximate; vague unorganized local environment; limited contact with national or provincial organizations.
2. Diffuseness or specificity of environmental interest.	Broad environmental interest in many aspects of system; specific units in environment have highly specific interest.
3. Degree of integration of relevant environment.	Not highly integrated; pluralistic not unified; competition among environmental units.
4. Supportiveness of the environment.	Assures minimum level of support; survival not a problem; generally favorable environment.
5. Pressure from the environment.	Subject to some scrutiny and criticism; no great pressure to carry on activities in a particular way.
6. Certainty and predictability of environmental conditions.	A high degree of predictability in the short run; few day to day contingencies.
7. Stability of the setting.	Less stable than formerly; changing cultural, social, political, and economic conditions.

It might be said of the environment in general that while it appears on the surface to be as broad as society itself, in reality a school district is forced to respond to a relatively small number of environmental units which are geographically concentrated. The school district may be exposed to a broad range of environmental interests but these interests are seldom expressed in a highly unified manner or with great intensity over an extended period of time. So far the environment has been generally supportive and predictable to the degree which seems to be essential for system functioning. If in the future the environment proves to be less supportive, even more diverse in its interest, less predictable, but at the same time places greater demands on the public school system then clearly some internal adjustments will be necessary.

Input: Information and Matter/Energy

It is obvious that the most significant determiner of what schools and school systems are like is the nature of the input; some of the significant characteristics of the input are:

Input Variables

Condition

Informational Input:

1. Source of task definition.

A general societal function; more specific definition of task at various levels; attempts at highly specific definitions left to school, teacher; frequently defined by activities rather than reverse.

2. Clarity or specificity of task.

General task vague and ambiguous; operational definitions difficult; some highly specific tasks can be identified.

Input Variables

Condition

Informational Input

- | | |
|---|---|
| 3. Complexity of task. | Task of educating difficult and complex because it involves modification of behavior; again, some less complex parts of total task can be identified. |
| 4. Knowledge of cause-effect relationships. | Not clearly understood; general knowledge but most effective way of achieving specific objective is not known. |
| 5. Alternative technology. | Few alternatives attempted; highly labor intensive emphasizing pupil-teacher roles. |

Matter/Energy Input

- | | |
|---|---|
| 1. Availability of resources | Minimum supply of resources is assured; few alternatives for supply. |
| 2. Fluidity of resources. | Most resources precommitted; use of funds and characteristics of personnel determined by outside sources. |
| 3. Storability of inputs. | Little possibility for storing of inputs; resources difficult to store; limited queuing possible. |
| 4. Timing and rate of input. | Input is cyclical rather than continuous, a unique characteristic; administrative and organizational decisions also cyclical; few times of entry into system. |
| 5. Control over various classes of input. | Incomplete control over resources; limited choice over pupils, at some levels none; personnel must be selected from available pools. |
| 6. Ratio of human/material input. | Strong emphasis on human input; low mechanical investment; limited variation in capital equipment. |

Matter/Energy Input	<u>Condition</u>
7. Variability of human input.	Pupils highly variable; may also be high variability within the professional staff.
8. Survival rate of personnel and replacement rate of equipment.	Survival rate varies but tends to be relatively low due to conditions beyond system control; equipment buildings, etc. tend to have relatively long life.

At the present time the characteristics of school district input force it to cope with a vaguely defined, complex task. The technology of teaching-learning is not highly developed in the sense that cause-effect relationships among teaching and learning events are only poorly understood. The technology has been characterized by high labor intensiveness with limited use of mechanical equipment; alternatives have existed only within this general condition. As research and experimentation continue in this area, we might expect to find improved understanding of the task, increased knowledge of cause-effect relationships, and as a result, an increased range of alternatives in the technology.

Some specific features of the matter/energy input have particular relevance for internal operations and structure. The cyclic nature of the inputs and the limited possibility for storing or queuing give administrative activity a distinctive character. This distinctive character is enlarged by the limited control and selectivity which the system can exercise over its resource input. As a result, the system is forced to cope with a highly diverse group of pupils under constraints which provide it with only limited alternatives for action. To the extent that input is made more continuous than intermittent, that the system is able to exercise

greater control over its inputs, that alternatives in technology can be exercised, to that extent there will be a significant difference in the appropriateness of various organizational alternatives.

Output

The output of the school system has already been identified as pupils who have been modified in some way; also included as outputs are effects upon the system itself. Of course, loss or waste also results -- turnover of professional personnel, pupils who leave prematurely, and so forth. Characteristics of the output which are relevant to this discussion are:

Output Variables

1. Time required to produce output.
2. Measurability of output; quantity and quality.
3. Uniformity of product.
4. Disposal of product.
5. Visibility of waste.

Condition

A long-term process although intermediate stages can be defined; may be viewed as a process which is never completed.

Count of numbers processed is easily obtained; assessment of quality of product difficult and elusive.

Expect definable general characteristics but emphasis is on diversity in specifics; pupils expected to be same in some ways, different in others.

General concern for disposal of product but no specific problem in moving students from level to level or back to environment.

Pupils who leave system are visible; efficiency of the system difficult to determine in terms of lost effort on part of personnel.

<u>Output Variables</u>	<u>Condition</u>
6. System flexibility, adaptiveness, and innovativeness.	Limited concern over system needs; not relevant to the survival of the system.
7. Morale and satisfaction of personnel.	General concern over satisfactions of staff; relatively favorable working conditions; less concern over pupil satisfaction.

Another one of the distinctive features of schools as organizations or systems, is the length of time which is required to produce the "finished" product. Even when we conceive of the school system as composed of distinct levels, the exposure at each level is measured in years rather than smaller units of time. This, together with the problem of determining quality of output and identifying waste, presents great difficulty in assessing the effectiveness or efficiency of the system at a particular point in time. Again, future developments and modifications in techniques and practices lead to a greater concern about system effectiveness and system needs than has been true in the past.

Boundary

The boundary of a school district viewed as a system is difficult to locate in space; nevertheless, it is useful to conceptualize in terms of elements which are within the system, those which are outside of it, and the characteristics of the boundary between the two.

<u>Boundary Variables</u>	<u>Condition</u>
1. Permeability of the boundary.	Appearance of highly permeable boundary; accessible to some but not others; information difficult to inject; influence attempts are resisted.

Boundary Variables

Condition

2. Permanence.

Boundaries difficult to change; new elements seldom accepted readily; boundaries retained beyond any apparent necessity.

Although a school district may appear to be easily penetrated and influenced, there are numerous indications that it is open to influence only from the "right" sources. For example, a school district may be influenced more quickly by educational practices in another school district than by the demands of a particular community. The permanence or institutionalization of school district boundaries, particularly in rural areas, is a well-known condition. Future developments may well involve a more permeable boundary to those elements which have been excluded before.

Feedback

Like other systems, schools are subjected to direct and indirect feedback. To some extent school districts are able to create a more favorable or a less favorable environment for themselves as a result of their operation; that is, schools either benefit from or suffer the consequences of the output which is produced.

Feedback Variables

Condition

1. Positive or negative feedback.

System may experience one, the other, or neither; more likely negative than positive; lack of feedback interpreted as positive.

2. Time lag or delay in obtaining feedback.

Long delay for feedback related to final product; fairly continuous feedback related to day-to-day operations; internal monitoring of processes.

<u>Feedback Variables</u>	<u>Condition</u>
3. Intensity and consistency.	Relative low intensity, except for occasional outrage; many inconsistencies in feedback; can be filtered and ignored.
4. Source and form.	Frequently feedback, in particular negative feedback, is from groups low in legitimacy and power; any feedback from groups high in both much less frequent.

A traditional stance is to see the school district under frequent attack and subjected to strong community pressures; however, feedback which is low in intensity, inconsistent, conflicting, and which comes from groups low in power and legitimacy can safely be ignored. Changing cultural and social conditions may require schools to be more attentive to feedback as well as to place greater emphasis on monitoring system processes for more immediate types of feedback.

System Characteristics

A final set of factors which have a bearing on internal operations relates to the characteristics of the system itself. These, too, may be viewed as independent variables which help to explain why certain events or structures occur in a particular form:

<u>System Variables</u>	<u>Condition</u>
1. Size: number of components.	Great possible variation in school district size; very few large, greater number of medium and an even greater number of relatively small districts.
2. Heterogeneity or complexity.	May be highly homogeneous or highly heterogeneous; variation in range of pupils, types of schools, types of programs.

<u>System Variables</u>	<u>Condition</u>
3. Age and history.	School system may have a long-standing identity or it may be a recent creation; new forms emerge which reflect historical development.
4. State: static equilibrium, dynamic equilibrium, morphogenesis.	Variation in states of school systems, some highly static, others dynamic, growing, changing.

The system characteristics mentioned above are frequently discussed by administrators in the form of questions such as: how large should a school or school district be? what is the best way in which to group grades or organize school systems from an administrative point of view? how do we create more flexible school systems? The trends would appear to be toward ever larger schools and school districts which provide a varied program of considerable complexity. The interdependence of the elements of a system ensures that these features will impinge upon many other parts of the system.

It would be most comforting if at this point it were possible to present a series of propositions which would relate the variables just discussed to specific internal characteristics of educational organizations. Although it may be possible to do this in a limited way for some of the variables, it becomes an extremely difficult task if one considers all possible interactions among the variables and their possible effects. The usual dodge is to proclaim that such an undertaking is beyond the scope of this paper, which it is; it is also well beyond the abilities of the writer. Some attention is given, both implicitly and explicitly to the

significance of these variables in subsequent sections of this paper; however, that is not the only purpose or value of the preceding discussion. Even if we did not pursue the implications of such variables, we would know at least what variables should not be ignored when we try to become prescriptive about the organization of schools and other organizations.

Internal Organization Processes

In order for system inputs to be converted into outputs, numerous and varied activities have to be carried on within the system. The activities are linked and so can be referred to as processes; the identification of processes is to some extent arbitrary but is also grounded in the activities of concrete system to which this section makes reference is a school district, but the processes which are discussed may be generalized to a variety of organizations (Katz and Kahn, 1966).

Primary Production (Teaching-Learning) Process

This process consists of all activities and events which are related to the primary purpose of the system: the influencing or modification of pupil behavior. It includes by far the single greatest number of activities and personnel in the system. The characteristics of this process are determined by the nature of the task (complexity, divisibility, etc.), by the technology which is used, and by various related factors including the characteristics and quality of the human input.

Primary production processes in educational organizations tend to rely heavily on pupil-teacher interaction in which the teacher tends to

to play a mediating role -- to use Thompson's (1967) terminology -- between pupil and the content and materials of instruction. Problems of pupil diversity and variability are usually handled by means of grouping or "batch" processing even though concern is expressed for individuals. There is a low degree of interdependence among the various individuals and units which are involved in the primary production process which permits a loose type of organizational structure. Some other features of the process have already been mentioned: low mechanization, technology not clearly understood, long term involvement of pupils, and so forth.

The primary production process holds a central position within the system in several respects: (1) it is the key subsystem for achieving the organization's purposes, and (2) the general form which the process takes determines in large measure how other processes will be carried out and how the system will be structured in general. An overly bold proposition, but one which is partly true, would be that given the nature of the primary production process and given relevant environmental characteristics most of the other significant characteristics of the organization could be predicted.

The only place where any in-depth changes in an organization can take place are in the primary processes; changes in other parts of the system may impinge upon output but not nearly to the extent that changes in the process itself will affect output. Changes in primary processes also demand adjustments in other processes in a rationalized system; this factor should be kept in mind by those who have the responsibility for designing rational educational systems.

Legitimation, External Relations, Goal Definition Processes

If any system is to survive it must engage in exchanges with its environment. One of the significant set of boundary functions includes goal definition, gaining support for system activities, and maintaining that support; external relations may also include gaining some degree of control over the environment. The extent to which any system will concern itself with these activities will depend upon the degree of dependence on the environment, the supportiveness of the environment, and also the stability and certainty of that environment, among other things. If there are significant changes in these there would likely be increased legitimation activities and possibly the emergence of new structures for carrying them out.

In most educational organizations legitimation is secured by mechanisms such as elected governing boards which perform the goal definition function, public control of informational input, periodic reviews by commissions of enquiry, and so forth. Such mechanisms are a frequent source of irritation to members of these organizations who perceive it as unnecessary control; however, it is these same mechanisms which give the organization whatever degree of autonomy and freedom it does enjoy.

Resource Acquisition and Distribution

The acquisition and allocation of human and material resources constitutes another significant function in the survival and effectiveness of a system. In most educational systems there is a fairly sharp distinction between subsystems concerned with instructional personnel

and those concerned with acquiring financial resources; however, this is no reason for ignoring the similarities conceptually.

As a result of the limited possibilities which many organizations have for increasing their financial resources, no elaborate resource acquisition subsystems have developed. Most of the subsystem activity has involved the determination of need and the distribution resources internally. However, as the possibility for increasing available resources emerges, or if granting resources is contingent upon some activity by the system, one would expect to find an increased interest in resource acquisition processes and in acquiring those resources on the least committed form.

For obvious reasons the subsystems for the acquisition and allocation of instructional personnel resources is more visible, particularly in larger systems. Among these reasons are the competition with other systems for personnel, great dependence upon personnel in the primary process, problems of replacement and others. Changes in the technology of teaching are likely to have a marked effect on the personnel acquisition activities.

Supportive Processes

Closely related to resource acquisition and distribution activities are various supportive activities which are designed to facilitate and increase effectiveness of the primary process. In a school district, identifiable subsystems are those which serve mainly the teacher, those which serve mainly pupils, and those which might be termed logistical.

The extent and form of supportive processes will depend upon the various system characteristics which have already been discussed in this paper. Efforts to serve a more diverse group of students at the same time as greater emphasis is placed on the individual student may require a greater emphasis on pupil personnel services. Increased demands on teachers, changes in technology, and more complex educational programs may require additional instructional support services. Along the same line of thought, increased system size, heterogeneity, and adaptiveness may call for a greater number and more varied form of logistical services.

Adaptive Processes

Adaptive activities are those which have the net effect of leading the system to be more effective in goal attainment, internal functioning, and coping with its environment. Adaptive subsystems study the possibilities for introducing new technologies or programs in an effort to improve present functioning as well as in response to changes in the nature of the task or environmental demands. The deliberate monitoring of feedback and planning for future contingencies are important elements in the adaptive process. It is obvious that the need for adaptive activities will be related to the rate of environmental change and also changes in the knowledge of cause-effect relationships in the central task.

Most school systems have tended to rely heavily upon adaptive activities elsewhere and incidental internal events for possible adaptive action. This has resulted in both an inadequate number of adaptive responses and occasional maladaptive response as systems relied upon

responses which may have been appropriate elsewhere. A possible future development is a much greater emphasis on adaptive, research, and development activities within each school system.

Managerial Processes

Managerial processes include control and integrative activities; through this process specific courses of action are selected, activities allocated and coordinated, and conflicts resolved. Perhaps to even a greater extent than is true for other processes, this process is determined both directly and indirectly by the nature of the primary production process. The extent to which it is possible to make decisions about production activities outside of that system, the extent to which control is desired or necessary, the extent to which activities must be coordinated, will all contribute to the unique characteristics of the managerial process in any particular system.

The presence of a need for some form of control and coordination process does not necessarily demand a bureaucratic form of control. Coordinative and control processes may take various forms; as yet we have only a restricted number of models from which we might select. The challenge to organizational designers is to develop new models.

One of the significant recent applications to organizational design has been that of systems analysis which attempts to identify subsystems and to apply rationalized and even quantitative techniques to increasing the effectiveness of those subsystems. Experience with these techniques is still limited; however, they do seem to hold considerable promise for effective extension to present control processes.

Organizational Structure

The essential organizational processes which have been discussed are carried out through fairly regularized and stable patterns of operation; these regularities define the structure of the organization. Organizational structure may be viewed as a response to two major requirements of a rationalized system: (1) the differentiation of activities and the allocation of these to system components, and (2) the coordination of activities so that there will be some meaningful total effect. Accordingly, the designing of organizational structures consists mainly of defining various roles and specifying the relationships among them.

Knowledge of key organizational processes is crucial to identifying what activities must be carried out; however, it is in no way deterministic in relation to structure. There is neither a simple nor necessarily a direct relationship between organizational processes and organizational structure. From an administrative viewpoint the most convenient division of labor would probably be the assignment of a single activity (process) to a single individual or unit; this is seldom possible. More frequently a single process involves the activities of numerous components and a single component may be engaged in more than one process. The structure of any deliberately contrived system which is the most rational for that system will be determined by the complex interaction of a complex set of factors. Decisions about organizational structure (under rationality norms) follow other decisions about organizational tasks and how these might be accomplished.

A general conceptualization of organization structure views it in terms of three distinct levels arranged hierarchically: the institutional level, the managerial level, and the technical levels (Parsons, 1956). These three levels are related to organizational processes somewhat as is shown in Figure 2.

Figure 2. Structural Levels, Processes, and Positions

Institutional Level	Managerial Level	Technical Level
<u>Legitimation Processes</u>		
<u>Resource Acquisition</u>		
<u>Resource Distribution</u>		
<u>Managerial Processes</u>		
<u>Supportive Processes</u>		
<u>Adaptive (External)</u>	<u>----- (Internal)</u>	<u>Primary Process</u>
Governing Councils, School Boards	Presidents, Superintendents, Staff	Professors, Assistants, Teachers

The institutional level includes those specific structures which are concerned chiefly with processes of legitimation, the management of environment-system relationships, broad goal definition, and the establishment of general policies governing the internal affairs of the system. Common and conspicuous structural units are such governing bodies as school

boards, councils, and boards of governors.

Such units are faced with one of the most difficult set of tasks: developing policies and rendering decisions which will be acceptable both to the relevant environment and to the organizational participants. Needless to say, what is acceptable to one group may not be acceptable to the other. This is closely related to a current dilemma at the institutional level in many educational organizations: the maintenance of both internal and external legitimacy. As a condition of the acceptance of policies, organizational participants seek more active and visible involvement in the development of those policies; such involvement may result in a reduction in the legitimacy of those policies as viewed by segments of the environment. In other words, this is a tradeoff situation in which the system may have to be satisfied to balance the forces or attempt to develop new structural solutions.

The second level of organizational structure, the managerial, is involved mainly in processes of the decomposition and distribution of resources, the coordination and control of organizational activities, and internal adaptive processes. Various production support activities will also likely be placed at this level. Among the more specific roles found at this level will be those of president, superintendent, specialized staff and so forth.

One of the persistent problems of any system concerns what roles are required at the managerial level and how these roles should be related to the other two levels. A significant increment in rationality would accrue in a system if it were to make such decisions on the basis of

precedent or practice in other systems. In many respects organizations are constrained in their choices because available roles are determined by training programs over which the organizations who employ these role performers have very little influence.

Roles and units at the technical level are those which are most closely related to the workflow process and which are indispensable to the completion of organizational tasks. The specific structuring at this level will reflect the nature of the task itself and the strategies adopted at the managerial level for coping with the task. Educational systems tend to be characterized by a fairly simple role structure at the technical level; however, there may be substantial possibilities for the development of a more highly differentiated role structure.

The problem of organizational design involves deciding about appropriate structures at each level as well as providing for links between adjacent levels. The high degree of indeterminacy about some positions, such as that of principal, might be attributable to the fact that it attempts, in part, to link managerial and technical levels in the school system. It is defined with varying degrees of emphasis on the functions associated with the two levels. Other examples of similar situations would not be difficult to identify.

Structural Characteristics

Since so many features of an organization revolve around decisions about the division of labor and associated coordinating mechanisms at the technical level, it is necessary to focus on these for more detailed analysis. In a highly rational approach, decisions about what form specialization should

take will be determined by the nature of the task, the knowledge of how the task might best be performed, and so forth. Coordinative mechanisms should grow out of the type of interdependence which role specialization creates and should be rationally related to it. Unfortunately, decisions about specialization have to be based on incomplete knowledge of the task or how it might be accomplished and also incomplete knowledge of the degree of coordination required or what form coordination should take.

Specialization

The division of labor in an organization is based upon two major types of specialization: (1) routine or task, and (2) non-routine or person specialization (Thompson, 1961). Routine or task specialization is well suited to large, even complex, tasks which are readily divisible or fractionated into simple tasks, and which can be learned, carried out routinely, and controlled by clearly specified programs. Non-routine or person specialization is required when the task is complex, cannot be divided readily into sub-tasks, and requires on-the-spot coping with contingencies; control and coordination cannot be handled in the same way as for routine tasks.

The crucial question in an educational organization is whether the task lends itself to task or to person specialization. Or perhaps a better way to phrase the question would be to ask, "To what degree is routine, task specialization possible and desirable, and to what degree is person specialization necessary or desirable?" It is only too easy to give glib answers to questions such as this. Some analyses present descriptions of the teaching task which emphasize its complexity and the great skill

required of teachers; yet there are many examples of highly routine activities even in the learning situation. But those who see teaching-learning as being completely routine portray a process which is not completely in accord with either our knowledge of how people learn or our own learning experiences.

It has been implied that teaching-learning has both routine and non-routine aspects; if this is so, then it is crucial from an organizational and administrative viewpoint to determine just where these different aspects lie. Impossible organizational situations are created when attempts are made to program and control non-routine functions as if they could be routinized. On the other hand, it seems wasteful of resources to treat routine tasks as if they required a high degree of person specialization. Although there have been some significant developments in resolving this issue, more work of the following type is required: (1) the analysis of teaching-learning activities; (2) the identification and separation of routine from non-routine tasks; (3) the provision of adequate and appropriate specialization and even mechanization; and (4) the development of appropriate mechanisms of coordination and control.

The results of such analyses will likely lead to developments such as: (1) more clearly developed and better understood differentiation of tasks at the technical level; (2) a greater variety of roles associated with teaching-learning; (3) greater diversity of personnel; and (4) a more complex structure at the technical level. The seeds of such developments are already apparent in the current literature on team teaching and differentiated staffing; however, the full organizational implications

of such structural changes at the technical level are seldom discussed.

Coordination

A more complex division of labor at the technical level will require more complex systems of coordination; in fact, many other features of the organization also become increasingly complex due to the difficulty of applying coordinative devices uniformly. It would seem most rational for a system to apply first the least expensive mechanisms which will serve the purpose (Thompson, 1967). The routine, repetitive activities are best coordinated through scheduling, standardization, and hierarchical control; schools and school systems should not be reluctant to apply these control procedures where they are appropriate.

Where activities are much more complex but where coordination is still required, it might be handled best through mutual adjustment by those whose activities are linked. This is a more costly way to achieve coordination but may be more compatible with the nature of the task than is hierarchical coordination. In other words, what is suggested is that for some types of coordination in an educational organization, a collegial model may be much more suitable than is a bureaucratic model.

General Guidelines and Implications

The preceding discussion and related theorizing does lead to some generalizations and guidelines which might be helpful in planning and designing educational systems. As might be anticipated, there are few guidelines which are universally applicable; each guideline must be modified and interpreted according to the characteristics of a particular organizational problem. For this reason, only some of the possible

implications of each generalization for organizational structure or administrative practice are suggested.

1. The design or structure of an educational system should reflect and, to a large extent, be determined by the characteristics of the primary production process (teaching-learning) and the constraints under which the process is being carried out.

The system model which has been developed in this paper incorporates a dynamic view of educational organizations and draws attention to the interrelationship of environment, elements, processes, and structural patterns. The main general implication which grows out of the discussion is that form or structure should follow purposes and process; organizational structure should also reflect the environmental conditions and external constraints under which the process is being carried on. To the extent that specific definitions of the task vary, that different approaches are adopted for accomplishing the task, and that different environmental conditions obtain, to that extent it appears impractical and non-rational to propose a uniform structure for educational organizations at various levels and in different geographic locations.

Implications. The specific implication of the acceptance of this guideline is that there should be differences in the organizational structures of elementary and high schools, of limited purpose post-secondary institutions and universities, of rural districts and urban districts as a result of conscious efforts to develop more rational structures.

2. The design of an educational system should incorporate a variety of specific organizational models; increased complexity in design may prove to be more appropriate for the total system than reliance upon a simplistic, uniform structure.

Administrative thinking tends to be biased toward a bureaucratic model; the possible efficiency of alternatives to bureaucratic forms is sometimes overlooked. It seems reasonable to suggest that, particularly in educational organizations, both bureaucratic and non-bureaucratic models should be present. Some processes or units might be organized according to one model, others according to another model, and yet each of the individual designs and all of them together might be highly rational. The elementary or rudimentary forms of these alternative models already exist within educational organizations and have only to be recognized and developed further.

Although the incorporation of a variety of models in one system presents somewhat of a challenge to administrators, there is little basis for expecting an unmanageable degree of conflict. In all probability there will be limited interface involving units which differ greatly in organizational form such as "bureaucratically" and "professionally" organized groups. Whatever conflict there is may be reduced if the rationality of a particular organizational form in terms of its purposes and processes is more generally recognized. The oft-mentioned conflict between bureaucracy and professionalism may be more a conflict between opposing views of the appropriateness of the respective models for specific activities rather than any inevitable incompatibility between the two modes within one system.

Implications. The adoption of the guideline suggested above might result in some of the following organizational features: certain functions or services in a school district (such as the logistical) might be centralized while other functions remain highly decentralized; high degrees of autonomy might be granted professionals in some areas of decision making while their involvement in others might be limited; and, some administrative personnel might be appointed while others might be elected or chosen by consensus. These varied practices would result from different decisions as to which appears to be the most appropriate means for particular purposes.

3. As more aspects of the relevant environment become less stable and less predictable, the desirability of flexibility in various processes and structures is increased.

The need for increased flexibility in relation to internal processes might be met through the development of ways of providing for the internal adaptive function; flexibility might be injected into a structure by greater reliance upon temporary subsystems and task forces which direct their attention to a particular mission at any one time. Once the mission's objective has been achieved, the members of the task force are assigned to another project. In other words, what might be required in administrative thinking is a shift in emphasis from organization to organizing.

Implication. This guideline suggests that there could be reduced emphasis on permanent, centrally-located personnel for coping with system problems; there may be several advantages to deploying such personnel

closer to the operative level. In other words, their "leadership" skills might be distributed throughout the system and brought together (along with additional persons) at various times to cope with particular problems or to work on particular projects. Obviously, such a strategy implies a reduction in the number of administrative and supervisory personnel who are located in the central office and changed roles for those who remain.

4. Both theory and research appear to support the desirability, in terms of various criteria, of an increased emphasis on groups in the design of organizational structures.

The development of more open systems and the facilitation of higher rates of interaction among members of a system appears to be fostered by emphasizing clusters of roles rather than individual roles. Groups provide the context for mutual adjustment, collegial control, improved communication and other conditions which are likely to further the attainment of organizational ends. A structural model which presents the organization as a system of overlapping groups has considerable utility over that of a model which places the emphasis on individual role performers.

Implication. The team form of organization at the teaching level is a highly significant recent development; however, the full potential of team approaches both in teaching and at administrative levels has yet to be developed. Further applications should result in the use of groups and overlapping group membership to breaking down some of the hierarchical barriers in educational systems and to developing more

participative decision structures.

5. Administrators of complex organizations should develop an increased awareness of the "organizational" problems and needs of these systems and should also develop ways of coping with such problems.

Organizations are contrived systems which are susceptible to a variety of malfunctions. Although our understanding of these organizational problems is still elementary, greater attention will need to be given in the future to the diagnosis of these problems -- such as that of destructive conflict -- and to designing procedures for overcoming those features of organization functioning which inhibit effective performance.

Implication. One of the new functions which might emerge in a complex system could be associated with the continuous monitoring or organizational processes. This could be a highly specialized set of roles encompassing skills which would be useful in assisting individuals and groups to become effective participants in the work of the organization.

6. Organization-environment relationships will require increased attention as it becomes more difficult to establish and maintain a good fit between a total system and its relevant environment.

The result of such attention might well be the emergence of more elaborate structural provisions for carrying out the necessary transactions between an organization and a more complex environment. Greater efforts might also be made to monitor organizational processes, to reduce time delays in obtaining feedback, and to increase the search for alternatives which might result in improved practice. All of these might lead to modifications in purposes and processes which are more in tune with the demands of the environment.

Implications. One possible strategy for a school district would be to place greater emphasis on various boundary functions by assigning these responsibilities to newly-defined roles. Alternatively, the school district might simplify the task by attaching increased significance to the individual school and expecting it to adjust to its particular environment. The emergence of school councils in urban areas may lead to the performance of functions at the school level which are now performed by school boards at the school district level.

7. Continued demands for efficiency and quality should result in an increased emphasis on planning and rationalized control procedures.

There is no reason why educational organizations should not be expected to become increasingly efficient in the sense of being able to achieve the same or improved results with fewer or less costly resources. Improvements in output may be produced by improved technology or by more effective use of resources and not merely by increasing all resources; this point of view has particular significance for the administration of internal organizational activities.

Implication. School districts and other educational units may again be forced to develop some new roles for this particular function. The planning unit might emerge as the most significant unit in the system to the extent that it collects, analyzes, interprets, and disseminates useful information to the other parts of the system.

8. Although the preceding comments suggest the possibility of increased centralization of control, the more desirable trend would be for the more widespread distribution of power, authority, and influence throughout the system.

In a high interaction, high influence system, the information which an individual or group has at its command will be more likely to determine who is influential than will hierarchical position. In such a system, power to control decisions rests more on knowledge than on position in the formal structure; there may be conditions under which this may prove to be a highly effective approach to arriving at organizational decisions.

Implication. A number of the previously mentioned implications are related to this particular generalization: team approaches to organizing, overlapping groups, decentralized decision structures, reduced emphasis on central office specialists, and the dispersion of expertise throughout the system. The real challenge in designing such a system will be to weave together the widespread distribution of influence and the essential centralized planning and control.

9. Control through the regulation of inputs should be considered as a possible alternative to control through the regulation of internal processes.

These two general approaches to control (input or process regulation) may be viewed as complementary, supplementary, or as alternative strategies. The desirability of granting groups and individuals some areas of discretion in their activities favors control through input regulation; that is, specifying objectives, planning programs, or providing information rather than enforcing specified procedures. Close regulation of process may be the most rational way in which to accomplish some tasks; however, there may be many other tasks for which it is

desirable to grant individuals fairly broad areas of discretion in the execution of various plans once the objectives have been identified.

Implication. This guideline offers more in the way of implications for administrative behavior than it does for organizational structure. It suggests that administrators might place greater emphasis on working with others in goal-setting, providing information and resources, and monitoring feedback rather than becoming immersed in the regulation of the specific activities.

10. Administrators should concern themselves more with the effects that the operation of the organization has upon people: clients, participants, and society in general.

Organizations are means to ends; the human costs of achieving ends must be placed in perspective. This point of view implies a need for giving continuing attention to the integration of individual and group goals with organizational goals. The concern for people should extend beyond a concern for equitable return for services rendered to a concern for equitable treatment of exceptional cases, serving those who need the organization most and not just those who are easiest to serve, and developing appeals systems for individuals who have some grievance against the organization.

Implication. In spite of our efforts to individualize instruction in various ways and to concern ourselves with students as individuals educational organizations still seem to be able to serve better those who need them most. Increased attention to various efforts to individualize should be accompanied by greater efforts to provide supportive services for both students and teachers.

11. Significant changes in organizational processes should result in retraining individuals in the performance of roles which have been modified and should also lead to the creation of new roles.

Any effort to project organizational structure into the future should be based on the realization that there may be highly significant role changes at all educational levels.

Implication. Various modifications in roles are already evident; pupil and teacher roles perhaps have been influenced most by emerging thought. These changes and others as well necessitate the reconceptualization of administrative and supervisory roles along the general lines that have been identified in some of the preceding generalizations.

12. The problems which are associated with such features as large-sized organizations, geographical dispersion of units, and system heterogeneity should be recognized and should result in modified structures for systems with one or more of these characteristics.

At the present time these factors present crucial challenges to administrative practices; yet there may be no alternative at times to large, or dispersed, or heterogeneous systems. The problems which they present may be difficult but are probably not insurmountable; the challenge is to devise mechanisms, procedures, and structures for making them work. On the other hand, increased size and concomitant heterogeneity should not be adopted as a solution to various educational problems. All that may happen is that the problems of a small system are traded for the problems of a larger system with no appreciable gain. When an organization becomes so complex that it fails to serve the same needs as the organization which

is too small, size may have yielded nothing for those whom it was supposed to serve.

Implication. School systems appear to have adopted a particular size solution to various educational problems or levels; elementary schools are relatively small while high schools are comparatively large and junior high schools fall between the two. It might be of more than passing interest to know what choices students and parents might make if they were provided with the alternative of either a large school or a relatively small one at the high school level. Given the relative ease with which it would be possible to operate much smaller high schools in the urban areas, school districts might well consider providing this alternative.

13. Interorganizational cooperation may become a more significant factor in the effectiveness of any particular organization.

Although many administrative and organizational problems may be unique, there are also many others which are common to a number of organizations. The search for solutions to these problems or for carrying on some activities may be sufficiently expensive to warrant organizational specialization; the sharing of information rather than secrecy and competition may prove to be highly beneficial for all. Furthermore, there may also be some merit in direct, non-hierarchical linkages between units which serve the same general population or set of clients.

Implications. One possibility is that of more direct links among schools in urban areas, either among those at the same level confronted with the same (or different) problems or direct linkages among

elementary, junior high, and high schools which serve the same areas. Schools and school districts might be linked together by mutual agreement for specified periods of time for various mutual benefits. Such linkages would further reduce the need for hierarchical coordination and control.

Some Alternative Models

A critical review of the preceding guidelines and generalizations draws attention to the need for bringing together some of the major ideas in the form of contrasting alternative models. Two models are described and discussed in this section for each of two organizational levels: school and school district organization. Although this would appear to restrict attention to a particular level of the total educational system, the models may also be applicable at other levels since the two sets describe units at the operative level and groups of operative units respectively. As a result the elements discussed may have more general relevance and applicability.

School Level Organization

Two possible types or models of organization at the school (operative) level are outlined in Table 1 according to their characteristics on a number of dimensions. It is assumed that specific organizational features result from or flow from the first two dimensions described to a large extent; that is, decisions about form or organization are determined by (or at least, influenced by) the conceptions of the task and conceptions of the learner. If the task is viewed as being relatively complex and learners are considered to be both complex and

and variable, then the organization described in Model 1 seems to be appropriate. The basic features of this model are a complex division of labor in which the team is the basic structural unit, the exercise of control by and within the team, increased scope, for decision making by teachers and students, and an emphasis on broadened conceptions of evaluation. On the other hand, a more simplified conception of both the task and the learner results in a more simplistic and hierarchical form of organization. Basically, the significant features of Model 2 include an emphasis on subject area specialization by individual teachers, limited attempts at coordination or coordination through hierarchical mechanisms, a narrow conception of evaluation and a limited role for teachers and students in decision making.

Although conceptions of task and of learner are viewed as basic to decisions about appropriate organizational design, there are, of course other constraints and influential factors as well. The particular model which is selected will depend also upon the characteristics of the environment, the availability of suitable role performers, the availability of resources and so forth. Such constraints might lead to the adoption of a model which is a mix of the two that have been described. The essential criterion to be applied is that the model should be compatible with the processes which it is designed to facilitate and the conditions under which the process is being carried out.

As far as the implementation of these two models is concerned, it is apparent that Model 1 is fairly descriptive of some forms of organization which are emerging at the elementary and high school levels while Model 2

Table 1

Models of School Level Organization

Dimension	Model 1	Model 2
Conceptions of Task	Task viewed as highly complex; teacher is necessarily involved in task definition; limited knowledge of cause-effect relationships; task requires intensive technology, close teacher-pupil interaction; task does vary in complexity.	Task conceived as relatively simple; defined by sources external to teaching situation; teacher plays mediating role between learner and subject matter; assumes high degree of knowledge of cause-effect relationships.
Conceptions of Learner	Emphasis on the learner as individual in group context; assumes high variability in relevant characteristics, need to individualize applied treatments.	Recognize limited variability in students on relevant characteristics; focus on similarities rather than differences; possible to treat in groups.
Specialization	Involves a complex division of labor, both routine (task) and non-routine (person) specialization; possible to have specialization with respect to both content and learning problems (students); extensive possibilities for use of various technological aids, and also of various types of resource persons.	No clear differentiation between routine and non-routine aspects of task; assume moderate level of person specialization required for all levels; basic specialization is around content.

Table 1 (cont'd.)

Dimensions	Model 1	Model 2
Roles and Structural Units	Basic structural unit is that of teams; within teams combine skills of highly specialized professionals and various classes of sub-professional aids and temporary resource persons.	Emphasis on the individual specialist teacher; has possibilities for assistance in some form, e.g. technical and clerical; limited use of sub-professionals and relatively inflexible use of temporary resource persons.
Coordination and Control	Control resides chiefly within the team and takes place through mutual adjustment; collegial and consensus norms prevail; hierarchical coordination of routine tasks; even if these control tend to be decentralized such as on services required by group.	Emphasis on hierarchical coordination on some matters; may also have very limited effort at coordination on many tasks; assumes competence of individual specialist; limited control through mutual adjustment.
Decision Role of Teachers and Students	Assumes significant decisions about the task, program, learning activities, media can and should be made by teachers and students.	Decisions made by agents external to school about the task, media, etc.; prescribed programs prevail and standard decisions inherent in the structure of the subject matter.
Evaluation of Outcomes	Emphasis on multi-dimensional criteria in evaluation; emphasis on output variability; evaluation of total process.	Evaluation in terms of a single criterion; emphasis on uniform or minimum standards for all; focuses on evaluation of the learner.

appears to be more descriptive of high school and post-secondary approaches to organization. There are probably a number of forces which will continue to maintain some distinction in organizational forms; however, it would seem to be appropriate to extend Model 1 forms of organization to various levels which define their task as broadly and in as much complexity as is implied. For those institutions which choose to focus on a highly specific definition of the task and which require a high degree of technical expertise, Model 2 forms of organization may still be the more appropriate and efficient. In general then, Model 1 should be extended to other levels and other aspects of the formal system of education while Model 2 should be retained for certain organizations to which it appears suited, namely, those concerned with highly specialized, precisely defined tasks.

Organization at School District Level

In much the same way as was outlined at the school level, two alternative models of district level organization and administration are developed in Table 2. As was suggested previously, the models may have more general applicability if they are viewed as relating to groups of units at various levels.

The general rationale underlying these models is that the form of organization will be and should be determined largely by characteristics of the environment, task and task definition, and the locus of curricular decisions. If the task is viewed as complex and if there are variations in conceptions of the task in a pluralistic and variable environment, then Model 1 appears to be the most appropriate. Essentially,

this model places considerable emphasis on the individual school and on the various functions which can be carried on at the school level; in simplified terms, it represents a decentralized organization. Many district level functions are carried on at the school level including external relations, supportive processes, and curricular decisions. The central office becomes more of a planning, information processing, facilitating center rather than the locus of hierarchical control. In simplified terms, the school district central office processes data and provides the information which enables other units to make more rational decisions rather than making the decisions and imposing these on the lower level units. It is fairly obvious that this model probably is most applicable in an urban rather than in a rural setting at the present time.

Model II bears some similarity to its counterpart at the school level of organization; it encompasses a more simplified conception of the task, a hierarchical structure and it is set in a more stable and less differentiated environment. It seems to be more appropriate to a rural setting, and it has many of the features of present forms of organization in such areas. A more centralized approach to the provision of various services assumes that what can be carried on in urban settings at the school level tends to be carried on and be provided for more effectively at the school district level. For some of these functions, a regional level of organization may be even more appropriate than a school district level. The general implication is that there should be a different allocation of functions in urban areas than in rural areas

Table 2

Models of Organization at School District Level

Dimension	Model I	Model II
Task and Task Definition	Total task of providing educational services viewed as complex; regional variations in specific task definitions; variations in clients to be served; accepts variable output.	Total task can be defined or reduced to relatively simple terms; variability can be anticipated and suitable programs can be devised; tends to emphasize uniform output or sets minimum standards.
Locus of Curricular Decisions	Decisions about many aspects of program made at school and within school levels; alternative programs considered and selected at lower levels.	Decisions made at the school district or higher levels; schools permitted to consider only limited alternatives.
Legitimation and External Relations	Viewed chiefly as a school level function; relations between each school and its immediate environment the concern of an elected council; district retains some parts of total function; retains elected or appointed boards.	Viewed as chiefly a district level function; relies upon elected board to serve the legitimation function; these activities serve school level needs and limited activities carried on there.
Resource Acquisition and Distribution	Mainly a district level function carried out in response to school needs; resources provided to school in fluid form; limited efforts from district to control specific use of resources.	Mainly a district or regional level function; school requisitions and resources distributed according to established criteria; school accounts for specific use of resources allocated by school district.

Table 2 (cont'd.)

Dimension	Model I	Model II
Supportive Processes	Logistical services centralized to a relatively high degree as demanded by economies of operation; controlled and operated by the school district; supportive services to teachers and pupils shared by few schools and controlled at those levels.	All supportive services provided by and controlled by the school district; specialist services intended to serve total district from a central point.
Adaptive Processes	External adaptive processes carried on chiefly at the district level; specialized units for monitoring the environment, obtaining feedback, and providing information for school level decisions; internal adaptive carried out at both levels with predominant emphasis on the school.	Both external and internal adaptive processes carried out at the school district level; information obtained is retained for use at that level; activities may also be carried out on a regional or provincial level.
Managerial Processes	School district wide planning and policy formulation is emphasized; control attempted through input regulation and resource, information provisions; dependence on control by mutual adjustment.	Emphasis on developing more specific programs of action specification of rules and procedures; regulation of internal processes through rules and supervision.
Input Control	Resources available to schools in fluid form (uncommitted) students enter at numerous times during the year; resource decisions being made continually.	Inputs controlled by the system; annual or semi-annual intervals; school exercises limited control over inputs.

Table 2 (cont'd.)

Dimension	Model I	Model II
Characteristics of Organizational Structure	Provides a small core of central office personnel; emphasis on planning-information functions; task forces organized to cope with system wide problems; flexible organization to respond to varying system needs; provision for overlapping group structure.	Generalist administrators as well as highly specialized personnel in central office; hierarchical, staff-line structure; permanent appointments with designated functions; formalized means and mechanisms of communications and information exchange; clearly distinct levels of organization.
Inter-School Variation	Relatively few special purpose schools as broader range of activities carried on within school; variation among schools of same type and level as a result of local decisions; emphasis on variations in structure and process from school to school.	More emphasis on special purpose schools to provide for different students; limited variation among school of same type or level as a result of central decisions; emphasis on similarity in structure and process.
Evaluation of Program and Output	Emphasis on total system evaluation -- resources, staff, pupils, operation; local program evaluation using data provided centrally.	Emphasis on evaluation by central office on data collected there; tendency to emphasize evaluation of pupils
Boundary Determination	Permeable boundaries determined by choices parents and students make; not defined geographically.	Boundaries fixed geographically by central decision or decree; low in permeability.

Table 2 (cont'd.)

Dimension	Model I	Model II
Environmental Characteristics	Highly differentiated; pluralistic, variable; high in interest and supportiveness; exerts pressure subject to change.	Vague, undifferentiated relevant environment; highly similar over wide geographical area; low in interest and supportiveness; predictable and stable environment.
Grouping of Schools	Many schools, dense population, urban setting.	Few schools, geographically dispersed, sparse population, rural setting.

and, consequently, different approach to organizational design.

An attempt to reconcile and relate school level organization to district level organization brings out the apparent compatibility of Models I and I with each other and Models 2 and II with each other. Although some mix might be attempted, the possibilities of dysfunctions and conflict would probably be increased. Thus, any attempt to modify organization and administration at the school level should also be accompanied by appropriate reorganization at the district level. Otherwise, the full benefits of the modification will not be realized, and the problems of those who work in the modified structure will be increased.

Conclusion

In retrospect, it is only too easy to identify many significant questions about organizational structure and the administration of educational organizations which might have been discussed but which, as was anticipated, have not even been mentioned in this paper. Perhaps the awareness of the multitude of issues and problems might be taken as justification for the more general approach adopted in this paper. To be more specific, the general framework developed in this paper, the issues which have been identified, the generalizations attempted, and the alternative models suggested may, perhaps, relate to many of the questions which those who must make decisions about organizational form and structure have to face. Even though this might not be true, it is a comforting thought for the writer at this point and also sincere hope.

The basic position of the writer might perhaps be stated once more: in the design of organizations and in decisions about desirable administrative structures we must be more aware of making those structures serve essential processes in various ways -- organizational structure and administrative practice are "dependent" variables and decisions about them can be made only in the light of knowledge about the relevant factors which have been identified and discussed. When specific structures are being considered in themselves, the underlying assumptions and implications for essential processes need to be clarified. Otherwise, changes in structure become meaningless and irrelevant manipulations.

Any analysis which borders on being prescriptive about organizational structure must sooner or later face the question: "How much difference does organizational structure and administrative practice make in the achievement of organizational goals?" Or, to put it another way, "How much of the variance in output can be attributed to the form of organization?" Both a limited number of empirical studies and intuition suggest that the answer may well be, "Some, but not very much." In discussing some of the matters that we have mentioned in this paper it is all too easy to be led into thinking that the form of organization is everything when, in actuality it may be considerably less than that. As yet, we have not succeeded in conceptualizing adequately how one might assess the merits of a particular organizational design; there seems to be no easy way to determine which will produce the "better" decisions. For schools and school systems, the most appropriate

structure might be described as that which best initiates and facilitates appropriate processes which directly involve the learner. Once the conduct of basic processes has been assured, there may be only a very limited additional contribution which organizational form can make to the achievement of objectives.

This may well be an extreme view of the limited significance of variations in organizational design and administrative practice; however, it is a possibility which should be considered by those who are placed in the position of having to make selections from among alternative models. The possibility of limited significance should make it much easier to accept variations in organizational structure and, at the same time, to suggest that minor variations in organizational design are not likely to yield major gains in goal-attainment.

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